

State of Energy Industry

Renewable Energy Workshop & Bus Tour - Randolph County June 2, 2025



About OED

Mission

To support the development of affordable, stable, and reliable energy solution for the benefit of all Hoosiers.

State of Indiana's federally-designated State Energy Office (SEO)

Priorities

Policy Guidance

Public Education



Grant Administration

Indiana's Energy Policy

All the Above approach

Support a diverse and balanced portfolio of energy resources

Responsible management of the energy transition

- Maintain energy reliability and affordability
- Adaptability to new and emerging technologies
- Economic and workforce development

Collaboration across Indiana agencies• State Energy Security Planning

Commercial Solar & Wind Energy Ready Communities Development Center



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Education & Outreach

Serve as an energy information hub for Indiana

Indiana Rural Energy Tours

Studies & Reports

- Study on Small Modular Reactor Technology
- Good Questions Project
- County Zoning Ordinances for Commercial Solar/Wind

Interactive tools

- Vehicle Fuel Dashboard
- Energy Map



Grant & Funding Programs

Benefit Hoosier citizens, communities, and businesses

Support Indiana energy policies and priorities





- State Energy Program
- **Energy Efficiency Conservation Block Grant**
- Indiana Energy Efficiency Fund

Indiana's Energy Landscape



Electricity

Liquid Fuels



Transportation





Energy Security

Energy Ready Communities

Indiana Energy Economy Facts

Top 10 agricultural state

- \$35.1 billion contribution to state economy
- Top producer of corn & ethanol –7th largest of nation
- More than 53,000 farming operations

Largest inland oil refinery

- BP Whiting refinery can process about 435,000 barrels of crude oil per day
- Only 5 U.S. refineries can process more crude oil

Most manufacturing-intensive state per capita

- No. 1 steel-producing state
- 5 major automotive OEMs with assembly plants
- Largest producer of RVs in North America
- Industrial sector accounted for 45% of Indiana's energy consumption in 2022



Key Federal & State Agencies

Federal

Federal Energy Regulatory Commission (FERC)

o Regulates interstate transmission of gas, oil, and electricity

• North American Electric Reliability Council (NERC)

- Develop reliability standards to safeguard the bulk power system 0
- o Conducts seasonal assessments on the reliability of the bulk power system

• U.S. Department of Energy (DOE)

o Policy and program administration, including research and development

State

Indiana Utility Regulatory Commission (IURC)

- o Regulates utilities to ensure safe, reliable service at just and reasonable rates
- Indiana Office of Utility Consumer Counselor (OUCC)
 - Represent all Indiana consumers to ensure quality, reliable service at the most reasonable prices possible



- Indiana Office of Energy Development (OED)
 - Shepherd comprehensive energy policy for the state 0



Electric System Overview





Regional Transmission Organizations (RTOs)





Indiana Electric Utilities

Regulatory structure

- Vertically integrated, rate-regulated state
- Utilities obligated to provide safe and reliable service to all customers

Investor-owned utilities (IOUs)

• 5 IOUs operate in Indiana

Rural Electric Membership Cooperatives (REMCs)

- 38 distribution REMCs operate in Indiana
- 2 Generation and Transmission companies supply power to the distribution REMCs

Municipally owned electric utilities

- 71 municipally owned electric utilities operate in Indiana
- IMPA provides generation and transmission services to 61 municipally owned Ο electric utilities





Five Pillars of Electricity Policy





Stability



Indiana's Changing Electricity Mix

Indiana's Generation Fuel Mix



The Region is Changing Too

MISO's Generation Fleet Transition



Indiana Energy Transition Figures

Coal usage dropped over 35%

- More than 4,500 MW of coal retired in the last decade
- Many Indiana utilities plan to exit coal completely by 2030

Increasing wind and solar

• Indiana's fuel mix is now roughly 11% wind and solar

Emissions from electric generation were cut in half between 2005-2020

A national leader in wind, solar, and storage development

- More than 5,500 MW in operation
- More than 8,500 MW approved, most expected to come online by end of 2028



Emerging Technologies





Distributed Energy **Resources**









Underground **Pumped Storage** Hydropower





Small Modular Reactors (SMRs)

Senate Enrolled Act 271 (2022)

- Added SMRs as a clean energy source in Indiana Law
- Opens pathway for utilities to consider SMRs as the technology matures

OED Study on SMRs

"SMRs present a viable opportunity for Indiana to transition to a cleaner, resilient and diversified energy future. Successful deployment of SMR technology requires a careful balance of economic, regulatory, and social considerations along with development of the technology."



Small modular reactors (SMRs) have a power capacity of up to 300 MW(e) per unit. Many SMRs, which can be factory-assembled and transported to a location for installation, are envisioned for markets such as industrial applications or remote areas with limited grid capacity. (Image: A. Vargas/IAEA)



Energy Ready Communities

Energy Ready Communities

Commercial Solar and Wind Energy Ready Communities Development Center

• Established under OED in 2023

Provide information regarding wind and solar energy development

Certification and incentive program for communities • Commercial Solar and/or Wind Energy Ready Community



Center Resources

Good Questions Project

• FAQ handout to assist communities with wind/solar projects

Incentive Calculator

	А	В	С	D	E	F
1	Energy Ready Community Development Center					
2	Incentive Calculator Estimates					
3						
4		Enter the Total Nameplate Capacity for the Project(s)	Capacity Factor*	Electricity Generated (MWh per year)	Incentive Estimate \$1/MWh (per year)	Incentive Estimate \$1/MWh (10 years)
5	Wind	200	0.33	578160	\$578,160	\$5,781,600
6	Solar	200	0.201	352152	\$352,152	\$3,521,520
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County Ordinance Comparison with State Voluntary Standards

Figure 1. Number of categories in IC 8-1-42 analysis met by counties' commercial solar zoning ordinance



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Certification as Energy Ready

Certification Guide

- Step-by-step application process for 0 **Energy Ready designation**
- Example responses provided 0
- Includes a copy of the current Ο regulations

Scan for Information and Certification Guide





Designation Criteria

- Eligibility Ο
- 10-year commitment Ο
- Types of local standards Ο
- **Project standards** Ο
- **Procedural standards** \bigcirc

Eligibility & Commitment

Eligibility

• County and municipal units of government

Commitment

- Demonstration of commitment to maintain:
 - o standards and procedural framework set forth in the unit's local regulations and/or standards, and
 - o all applicable zoning, land use, and planning regulations.
- Commitment must be at least 10 years from the latter of:
 - project's start date of full commercial operation or Ο
 - o date of IOED's certification



Types of Local Standards

Regulatory

- Standards that have been adopted and enacted through regulations at the unit level
- Zoning and planning ordinances encompass the unit's jurisdiction Ο
- Covers all projects within the unit Ο

Contractual

- Standards that have been outlined through a legally-binding contract between the unit and project owner
- **Project-specific**
- May require submit separate certification applications for each project within the unit Ο

Economic Development Agreement

• Standards that have been outlined through a legally-binding economic development agreement between the unit and project owner



- **Project-specific**
- May require submit separate certification applications for each project within the unit

Project Standards

Local standards must demonstrate the wind/solar project standards are no more restrictive than the voluntary state standards set forth by IC 8-1-41 (wind) and IC 8-1-42 (solar)



- 1. Setback, height, buffer requirements
- 2. Shadow flicker limitations
- 3. Signal interference
- 4. Sound level limitations
- 5. Light mitigation technology
- 6. Damage to drainage infrastructure
- 7. Decommissioning and site restoration plan



- Ground cover
- 3. Fencing
- 4. Cables
- Glare minimization
- 6. Signal interference
- 7. Sound limitations
- Damage to drainage infrastructure 8.
- Decommissioning and site restoration 9.
- 10. Abandonment
- 11. Force majeure event





Standards for Solar

1. Setback, height, buffer requirements

Procedural Standards

Clear and transparent process to identify potential sites for development

- Unit's development process and procedures, and where to locate them online
- Easily accessible map of potential development locations within the unit Ο
- Contact information for relevant unit officials

Does not unreasonably eliminate portions of the unit for project development

• Unit map that denotes areas for development

Provide a fair review and approval process, including final approval that cannot be revoked • Unit's public review process including applicable local code/standards Documented public review of each wind/solar project under consideration

- Appeals process for members of the unit
- Clear demonstration of commitment to the project, incentives, permits, and others as applicable

Plan for how incentive funds would be used if granted

- Economic development purposes within or near the project's footprint, or
- Benefits residents and businesses within or near the project's footprint 0



Certification Application Checklist





- Regulations
- Contract
- Economic development agreement



- Supp Ma
 - Maps, letters of support, copy of ordinances, etc.



Copy of wind or solar standards

Supporting documentation

Thank You

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